MODIS TECHNICAL TEAM MEETING

October 29, 1998

Vince Salomonson chaired the MODIS Technical Team Meeting. Present were Mike Roberto, George Serafino, Eric Vermote, Harry Montgomery, Robert Murphy, Ed Masuoka, Wayne Esaias, Dorothy Hall, Al Fleig, Barbara Conboy, Dan Tarpley (NOAA), Gene Legg (NOAA) and Dave Toll.

1.0 SCHEDULE OF EVENTS

Next MODIS Science Team Meeting, December 15 and 16, 1998. University of MD Conference Center in College Park, MD.

2.0 MINUTES OF THE MEETING

2.1   Instrumentation

Salomonson reported that the MODIS PFM instrument unquestionably from a scientific perspective should be sent back to SBRS for recalibration (see Oct. 22 Minutes for more details) of the thermal bands (#20, #22 & #23 for Sea Surface Temperature) because of the resistor replacement.   Roberto said Goddard requested Lockheed and SBRS to remove the circuit boards and replace the problem resistors to the PFM.   The work should be completed by around Thanksgiving.   Then the hardware problem will have been fixed and the question is how much recharacterization there will be. MCST is completing a white paper on the possible PFM recalibration.   Salomonson and Roberto indicated the possible recalibration at SBRS may provide a calibration to a 0.3% accuracy.   However, Salomonson noted a combination of logistics, costs and science will ultimately determine the decision if the PFM will be sent back to SBRS for recalibration. Salomonson said he and other MODIS Technical Team members will meet with Bill Townshend (NASA HQ) in the next few days to further discuss the problem. Roberto said a much less optimal solution is to plot the spectral response versus scan angle by shipping the GSE to Valley Forge for ambient tests. Salomonson reported another much less optimal solution is to rely on a post-launch vicarious calibration over the next several years.

Roberto reported the two independent electrical problems, one on the power supply shutdown, and two, a drift in the PC bands (see Oct. 22 Minutes). Roberto reported people are being brought in to examine the electrical problems. Steve Meyer from Code 565 will work here at Goddard, and shall confer with Dave Rogers, the lead engineer at SBRS on this issue, looking at the power supply drawings, circuit plans, temperature control of cold focal planes, etc. to examine the power supply problem and the PC detector drift problem. Meyer also is working with Jim Brewer, one of the power supply designers, and Wendell Cowdrey, the lead engineer on the power supply recovery for the Enhanced Thematic Mapper+ and a lead electronics engineer for ETM+. Roberto said they are trying to determine all of the tests that should be done while in thermal

vacuum since the electrical problems may not occur during ambient testing. Roberto mentioned there is about a 50% chance that the FM1 will eventually have to go back in to thermal vacuum for retesting. However, Roberto noted most of the test data during thermal vacuum is independent of the problems and would not have to be repeated. Roberto said the other FM1 thermal vacuum tests are going very well. The thermal vacuum testing should end by around Nov. 8.

Murphy said ITT and SBRS were designated as the two contractors for the. AGI-VIIRS instrument (MODIS follow-on) planning . Murphy said MODIS is now in negotiations with the Integration Project Office (IPO) on how to proceed. He reported he is working with NASA HQ on the formation of a Scientific Steering Group.

2.2   SDST

Fleig reported the Memorandum of Understanding between ESDIS and SDST on PI Processing is currently going under review by Ramapriyan (ESDIS). In addition, Fleig and Masuoka said the SDST PI Processing Proposal is completed and is going through an internal Goddard approval.

Hall said NSIDC is requesting that MODIS permit them to process MODIS data in the EASE-Grid projection. Masuoka is preparing primarily two options. One is the current plan to use EASE-Grid at MODAPS and then send to NSIDC. The second option is to treat NSIDC like a team member and engage them at the MODAPS for a joint collaboration. Hall said an issue is who is going to monitor the quality of EASE-Grid work after the current contract runs out in 2001? Salomonson and Fleig said PI processing will occur through the EOS pm, although there will be a call for new proposals after 2001.

Masuoka is going to request that Bob Evans through an email to review the Ocean Color Products before SDST starts inputting them in to MODIS Emergency Backup System (MEBS). There are some negative radiance leaving water issues that should be resolved before SDST prepares large sets of data.

Masuoka is preparing for NOAA a time schedule of its Level 2 through 4 products. Tarpley (NOAA) said NOAA only plans to obtain Level 1 data from the DAAC's for its near real-time data product requirements (e.g., SST). Products such as NDVI that do not have a near real time requirement by NOAA, will not be processed at NOAA. Instead NOAA will obtain products through the DAAC archive and distribution process. Murphy said a possible issue is the limited amount of data that ESDIS will distribute due to budget constraints. Murphy indicated the limited data may be a major consideration to NOAA in their data requests. Serafino noted a demonstrated requirement such as from NOAA would help GDAAC in their long term planning and requests for funding.

Masuoka briefly summarized their data product status (Attachment 1). Masuoka said the only delivery not on schedule is the snow daily Climate Modeling Grid

(CMG) Product. Hall and Masuoka agreed there is no rush and that the product will be delivered to SDST next February. Masuoka said the CMG Products testing by SDST will come after the Atmosphere and Oceans Product testing. Masuoka said a minor delay in the cloud and aerosol testing is from a short-term problem of the FORTRAN versions between SDST and the GDAAC that will be resolved soon. Last, the delay in the ocean productivity product is because SDST wants to meet with Esaias to go over some issues. Esaias and Masuoka agreed to meet soon.

2.3 Goddard DAAC

Serafino (Attachment 1) summarized GDAAC notes for the last week. He said the DPREP on the attachment refers to an ECS provided set of ephemeris and EOS-am attitude data. Serafino said as noted in the shaded area on the 2nd page of the attachment, GDAAC is starting to use charts for tracking the ingest of PGEs. The charts will enable users to monitor the status of the data products.
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2.4 Discipline Reports

Vermote said MODLAND completed reviewing the current MODIS Adaptive Processing System (MODAPS) Requirements Document. The updated version will be given to the other discipline groups soon. Vermote is coordinating a PI processing meeting that will take place in approximately two weeks to discuss with discipline leaders, PI representatives and SDST, the details of MODAPS implementation, the MEBS-WILT test results and the MODAPS requirements document review.

Salomonson reported NOAA and NASA/Goddard will work together on collaborative activities such as on MODIS data products. For example, NOAA may assist with validation of the MODIS products. Salomonson said other activities for joint collaboration may include snow, land cover, NDVI, etc.. Tarpley said that Gutman (NOAA) is currently working with the Fire Product algorithm from Justice.

Esaias had a telephone conference with Masuoka and Bob Evans to discuss manpower staffing for MOCEAN QA at the SDST. Masuoka said SeaWiFs may have someone for consideration. Esaias said that SDST incorporated Evans comments on the PI Processing plans. Esaias said he is completing the SeaWiFS Exploitation Initiative (SEI) Implementation Plan that should be finished by the end of next week

2.5 Budget

Murphy reported three Science Team members and two of the Support Groups have not turned in their FY99 budgets. The FY99 budget for MODIS is not finalized but King gave Murphy tentative figures MODIS can work with. Murphy said he is providing information to the Discipline Group Leaders for their inputs.

Murphy also reported that if the PI Processing budget is reduced, MODIS should prepare plans for possible work reduction plans accordingly. The discipline groups to be convened by Vermote will assist with changes to MODAPS from any budget changes.

3.0 Action Items

3.1 New Action Items

None.

3.2 Ongoing Action Items

1. Vermote: Set up a meeting about three weeks from now to review the PI Processing Plans.

Status: This item remains open.

2. Gentler: Deliver a schedule for an earlier date on Level 1 code. In addition work on, if possible, a more modularized version of the Level 1B code to minimize any problems from forthcoming software changes.

Status: This item remains open.

3. Murphy: Investigate the status of direct broadcast and present an update to the Technical Team.

Status: This item remains open.

4. Murphy: Coordinate a MODIS approach for radiance-to-brightness temperature conversions.

Status: This action remains open.

5. Guenther: Assign an MCST member to talk with Vermote about the scaling of DN* in the current L1B file format.

Status: This action item is closed. MCST will implement the changes in scaling that MODLAND has requested, and this should not impact Level 2 code.

6. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

7. Masuoka: Distribute an e-mail message summarizing the status of production rules at ECS.

Status: This material was presented at the last Science Team meeting (June 24 - 26). Masuoka will update this information and pass it along to the discipline group leaders.

8. Murphy: Speak to MCST and the discipline group leaders about what to include in a Version 2.1.1 Level 1B delivery.

Status: This item remains open.